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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,870	11/14/2003	Purushottam Das Agrawal	PDA-1005	1871

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EXAMINER
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ROBERTSON, JEFFREY

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/713,870

Applicant(s)

AGRAWAL, PURUSHOTTAM DAS

Examiner

Jeffrey B. Robertson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 9, 11-13, 16, 17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 4, 6-8, 10, 14, 15 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0204.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 20 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 8 and 9 of copending Application No. 10/668,980. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 20 of the instant application is a product-by-process claim that is directed to an article containing the components in amounts that either encompass or significantly overlap the amounts of claims 1, 8, and 9 of the '980 application. The styrene-isoprene block copolymers of the '980 application are encompassed by the styrene-olefin copolymers of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tasaka (U.S. Patent No. 5,936,037).

For claim 1, Tasaka teaches elastomeric compositions used to form articles. In column 6, lines 54-59, Tasaka teaches the presence of a polyurethane in an amount of 10 to 1,500 parts by weight. In column 5, lines 1-6, Tasaka teaches a vinyl aromatic/olefin copolymer in an amount of 100 parts by weight. Tasaka teaches that styrene is the aromatic monomer. Col. 9, lines 6-17. Tasaka teaches that ethylene/vinyl acetate copolymer is added in an amount of 3 to 50 parts by weight. Col. 10, lines 14-15 and col. 11, lines 35-38. Tasaka teaches the presence of a maleic anhydride grafted polypropylene in an amount of 0.01 to 15 parts by weight in col. 17, lines 39-56. Given the range listed for the polyurethane, the amounts of the other components significantly overlap or encompass the ranges set forth by applicant. In the alternative, it would have been obvious to one of ordinary skill in the art at the time of

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the invention to vary the amounts of each component depending on the desired properties of the blend.

6. Claims 2, 3, 5, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tasaka (U.S. Patent No. 5,936,037) in view of Kikuchi et al. (U.S. Patent No. 5,102,962).

For claims 2 and 3, Tasaka teaches elastomeric compositions used to form articles. In column 6, lines 54-59, Tasaka teaches the presence of polyurethane in an amount of 10 to 1,500 parts by weight. In column 5, lines 1-6 and col. 9, lines 6-7, Tasaka teaches a vinyl aromatic/olefin copolymer in an amount of 100 parts by weight. Here, Tasaka teaches that styrene is the aromatic monomer and SEBS or SEPS polymers, which are styrene-ethylene copolymers. Col. 9, lines 6-17. Tasaka teaches that ethylene/vinyl acetate copolymer is added in an amount of 3 to 50 parts by weight. Col. 10, lines 14-15 and col. 11, lines 35-38. Tasaka teaches the presence of a maleic anhydride grafted polypropylene in an amount of 0.01 to 15 parts by weight in col. 17, lines 39-56. Given the range listed for the polyurethane, the amounts of the other components significantly overlap or encompass the ranges set forth by applicant. In the alternative, it would have been obvious to one of ordinary skill in the art at the time of the invention to vary the amounts of each component depending on the desired properties of the blend.

For claim 5, Tasaka teaches the formation of an extruded sheet in col. 23, lines 47-54.

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Tasaka teaches the presence of a phenolic antioxidant in an amount of 3 parts by weight or less. See col. 16, lines 31-36. Tasaka does not expressly teach that the phenolic antioxidant is a resin.

Kikuchi teaches the use of phenolic resins as antioxidants for thermoplastic resins in col. 1, lines 9-24 and col. 2, lines 13-36.

Kikuchi and Tasaka are analogous art in that they both teach thermoplastic resin compositions with phenolic antioxidants. It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the phenolic resins of Kikuchi in the compositions of Tasaka. The motivation would have been that Kikuchi teaches that the phenolic resin has better heat resistance than conventional phenolic antioxidants such as those set forth in Tasaka.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tasaka (U.S. Patent No. 5,936,037) in view of Nguyen et al. (U.S. Patent No. 5,451,106).

For claim 11, Tasaka teaches elastomeric compositions used to form articles. In column 6, lines 54-59, Tasaka teaches the presence of a polyurethane in an amount of 10 to 1,500 parts by weight. In column 5, lines 1-6, Tasaka teaches a vinyl aromatic/olefin copolymer in an amount of 100 parts by weight. Tasaka teaches that styrene is the aromatic monomer. Col. 9, lines 6-17. Tasaka teaches that ethylene/vinyl acetate copolymer is added in an amount of 3 to 50 parts by weight. Col. 10, lines 14-15 and col. 11, lines 35-38. Tasaka teaches the presence of a maleic anhydride grafted polypropylene in an amount of 0.01 to 15 parts by weight in col. 17,

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lines 39-56. Given the range listed for the polyurethane, the amounts of the other components significantly overlap or encompass the ranges set forth by applicant. In the alternative, it would have been obvious to one of ordinary skill in the art at the time of the invention to vary the amounts of each component depending on the desired properties of the blend.

Tasaka fails to teach that an extensional flow mixer is used along with an extruder.

Nguyen teaches an apparatus for mixing polymers that includes an extruder and an extensional flow mixer. Col. 1, lines 5-16 and col.4, lines 36-51. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the apparatus of Nguyen in order to process the compositions of Tasaka. The motivation would have been that Tasaka teaches that conventional methods can be used to process the polymers. Col. 21, lines 45-67. Nguyen teaches that the apparatuses set forth in the patent have advantages over conventional mixing methods. See Col. 3, lines 19-36. One of ordinary skill in the art would have wanted to apply these advantages to the compositions of Tasaka.

8. Claims 12-13, 16, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tasaka (U.S. Patent No. 5,936,037) in view of Nguyen et al. (U.S. Patent No. 5,451,106) as applied to claim 11 above, and further in view of Kikuchi et al. (U.S. Patent No. 5,102,962).

For claim 12, Tasaka (U.S. Patent No. 5,936,037) in view of Nguyen et al. (U.S. Patent No. 5,451,106) teach the limitations of claim 11 as set forth above. For claim 13,

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Tasaka teaches the presence of polyurethane as set forth above. For claim 16, Tasaka teaches the formation of an extruded sheet in col. 23, lines 47-54.

Tasaka fails to teach the presence of the phenolic resins as set forth in claim 12.

Kikuchi teaches the use of phenolic resins as antioxidants for thermoplastic resins in col. 1, lines 9-24 and col. 2, lines 13-36.

Kikuchi and Tasaka are analogous art in that they both teach thermoplastic resin compositions with phenolic antioxidants. It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the phenolic resins of Kikuchi in the compositions of Tasaka. The motivation would have been that Kikuchi teaches that the phenolic resin has better heat resistance than conventional phenolic antioxidants such as those set forth in Tasaka.

For claims 17, 19 and 20, Tasaka teaches articles in col. 22, lines 19-45. The examiner's position is that the deformation and tension measurements would be inherent to the articles produced from these materials using the extensional flow mixer/extruder combinations.

9. Claims 4, 6-8, 10, 14, 15, 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Abe et al. (U.S. Patent No. 5,296,273), Chundury et al. (U.S.




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Patent No. 5,601,889), Horion et al. (U.S. Patent No. 5,852,118), Takahashi (U.S. Patent No. 5,910,540), Kozma et al. (U.S. Patent No. 6,242,503), and Ikeda et al. (U.S. Patent No. 6,479,590) are cited for general interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (571) 272-1092. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeffrey B. Robertson  
Primary Examiner  
Art Unit 1712

JBR